nepal college of information technology

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| Level: Bachelor | Semester – VI(Spring) | Year : 2012 |
| Programme: BE(IT) | | Full Marks : 70 |
| Pass Mark : 35 |
| Course: Object Oriented Design and Modeling through UML | | Time : 2 hrs |

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| *Candidates are required to give their answers in their own words as far as practicable.* |
| *The figures in the margin indicate full marks.* |
| Attempt all the questions. |

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| 1. | 1. Explain each step of iterative and incremental development. 2. Define use-cases? Why use cases model is important during analysis? Explain real and essential use-cases? | 7  8 |
| 2. | a. Draw system sequence diagram for enterItem in POST. Explain system event and system operation.  b. **Case Study1: Automatic Teller Machine (ATM)**  **Requirements:**  This system shall provide automatic cash withdrawal to the customers of the ABC Bank Pvt. Ltd. The Bank provides an ATM card to each of the interested customer. The customer is verified by the PIN (Personal Identification Number).  The system verifies:   * The Customer * Amount withdrawn in always not more than Rs. 30000   The system shall also print the receipt for the current transaction that includes the amount withdrawn in this transaction, and the balance amount in his account.  Now answer the following questions:   * Identify all the Use-cases and Actors and draw the Use-Case diagram for the above scenario.   Draw the collaboration diagram for the primary transaction of the machine. | 7  8 |
| 3. | 1. What is a collaboration diagram? How do we represent mutually exclusive conditions in a collaboration diagram? Justify with an example. 2. What do you understand by the term association? Explain multiplicity with an example.   . | 7  8 |

4. a) Distinguish between Primary, Secondary and Optional Use Cases with example. 5

b) Draw and explain sequence diagram for issue book and renew book for library automation software. 10

5. Short Notes (Any Two) (2\*5)

a) Inheritance

b) Iterative development process

c) The importance of UML in object Oriented Analysis and Design